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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,048	03/05/2002	Thomas W. Kuehnel	14531.146	7793

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EXAMINER

APPIAH, CHARLES NANA

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/092,048	Applicant(s) KUEHNEL ET AL.	
	Examiner Charles N. Appiah	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 is/are allowed.
- 6) ☒ Claim(s) 10-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 August 2005 has been entered.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 10, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by **Jansen (EPO 1 175 111)**.

Regarding claim 10, Jansen discloses (see Figs. 1 and 2), a radio module (21) for use with each wireless device in a wireless communication network such that communication occurs between the wireless devices over the wireless network, wherein the radio module's performance depends on the radio module's position within the wireless network, the radio module comprising: an antenna module (15) that includes an antenna and is an integral part of the radio module (antenna 15 is an integral part of outdoor unit 21), an interface circuit for logically connecting the antenna module with a host device (transceiver 25 interfaces between antenna 15 and computer 13), wherein the interface inherently includes a baseband module that demodulates and decodes

signals received over the antenna module and that modulates and encodes signals transmitted through the antenna module (inherent feature of transceiver means transforming the data signal into an RF signal to be transmitted by outdoor antenna 15, or for transforming the RF signal received by the outdoor antenna into a data signal to be received by the computer, see col. 3, line 58 to col. 4, line 8), a physical interface for detachably connecting the radio module with the host device (USB interface 24 allowing peripherals to be attached, used and detached, see col. 4, line 52 to col. 5, line 2), and a cable (26) that supports the logical connection between the interface circuit and the host device through the physical interface, (four wire cable 26 such as a USB cable, connecting computer and outdoor unit 21, see col. 4, lines 17), wherein the cable inherently permits the radio module to be flexibly positioned within the wireless network without dictating the host device's location (alternative arrangement as illustrated in Fig. 2 enhancing performance of the system by eliminating the need for a (long) coaxial cable, see col. 4, lines 8-10). It is inherent that the cable would allow the outdoor unit to be placed at different locations irrespective of the location of the computer).

Regarding claim 11, Jansen further discloses wherein power to the radio module is supplied through the physical interface (two of the wires of the 4-wire cable being used to supply power to the outdoor unit 21, see col. 4, lines 19-21).

Regarding claim 12, Jansen further discloses wherein the interface circuit comprises one or more of: a host interface module that forms a logical interface between the host device and the radio module, a data link control module that performs

at least error control for the host device and a media access control module that manages a bi-directional bit stream between the host device and the antenna module (USB cable with USB interface supporting data exchange between host computer and a wide range of accessible peripherals. See col. 4, lines 45-58).

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claim 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jansen** as applied to claims 1 and 10 above, and further in view of **Todd et al. (6,035,183)**.

Regarding claim 13, Jansen fails to specifically disclose a user interface that indicates to a user when the radio module is optimally positioned within the wireless network, wherein the flexible cable permits the user to re-position the radio module within the wireless network until the user interface indicates that the radio module is optimally positioned.

Todd discloses a system and method for a fixed wireless access terminal to determine and display to a user signal quality information such that user can adjust the location of the access terminal for optimized signal reception (see col. 4, lines 18-67 and col. 5, lines 28-64).

It would therefore have been obvious to one of ordinary skill in the art to incorporate the link quality determination and indication feature of Todd into the system

of Jansen in order to provide optimal signal quality indication for desired quality communications.

6. Claims 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jansen (EP 1 175 111)** in view of **Funk et al. (6,026,119)**.

Regarding claims 14 and 15 Jansen meets all limitations as applied to claim 10 above. In addition Jansen discloses wherein the radio module includes a processor, wherein the processor performs processing required by the interface circuit, wherein processing not performed by the processor occurs on the host device (inherent features of transceiver means transforming the data signal into an RF signal to be transmitted by outdoor antenna 15, or for transforming the RF signal received by the outdoor antenna into a data signal to be received by the computer, see col. 3, line 58 to col. 4, line 40), but fails to explicitly teach that the radio module include a memory.

In an analogous field of endeavor, Funk discloses a wireless packet data communications modem, which can used in conjunction with a computer to provide access to other computer users, wherein the radio module has a memory and processing capability (see EEPROM as illustrated in Fig. 4, col. 3, lines 13-42 and col. 5, lines 8-15).

It would therefore have been obvious to one of ordinary skill in the art to provide the memory and processing capability of Funk's radio module to Jansen's system in order to ensure the capability of storing information required for transmission and reception of data as well as other information for the proper exchange of data with the wireless communication network.

Regarding claim 16, Jansen discloses (see Figs. 1 and 2), a radio module (21), that can be flexibly positioned within a wireless network to improve performance of the radio module, the performance of the radio module varying based on position within the wireless network, the radio module comprising: an antenna module (15) that includes an antenna and is an integral part of the radio module (antenna 15 is an integral part of outdoor unit 21), an interface circuit, wherein the interface circuit includes inherently a baseband module, a media access control module, and a physical layer module (inherent features of transceiver means transforming the data signal into an RF signal to be transmitted by outdoor antenna 15, or for transforming the RF signal received by the outdoor antenna into a data signal to be received by the computer, see col. 3, line 58 to col. 4, line 8), a processor, wherein the processor provides processing requirements for the interface circuit on the signals that are received and broadcast over the wireless network (inherent features of transceiver means transforming the data signal into an RF signal to be transmitted by outdoor antenna 15, or for transforming the RF signal received by the outdoor antenna into a data signal to be received by the computer, see col. 3, line 58 to col. 4, line 40), a protocol link (IEEE 802.11 wireless standard providing 11Mbps/data transfer, col. 4, lines 36-44), a physical interface including a cable that detachably connects with a host device such that the radio module may be moved within the wireless network to improve antenna performance without changing the host device's location (USB interface 24 allowing peripherals to be attached, used and detached, see col. 4, line 52 to col. 5, line 2, four wire cable 26 such as a USB cable, connecting computer and outdoor unit 21, see col. 4, lines 17),

and (alternative arrangement as illustrated in Fig. 2 enhancing performance of the system by eliminating the need for a (long) coaxial cable, see col. 4, lines 8-10). It is inherent that the cable would allow the outdoor unit to be moved to different locations irrespective of the location of the computer). Jansen fails to explicitly teach wherein the radio module includes a memory.

In an analogous field of endeavor, Funk discloses a wireless packet data communications modem, which can be used in conjunction with a computer to provide access to other computer users, wherein the radio module has a memory and processing capability (see EEPROM as illustrated in Fig. 4, col. 3, lines 13-42 and col. 5, lines 8-15).

It would therefore have been obvious to one of ordinary skill in the art to provide the memory and processing capability of Funk's radio module to Jansen's system in order to ensure the capability of storing information required for transmission and reception of data as well as other information for the proper exchange of data with the wireless communication network.

Regarding claim 17, Jansen further discloses wherein the radio module receives power from a host device (two of the wires of the 4-wire cable being used to supply power to the outdoor unit 21, see col. 4, lines 19-21).

Regarding claim 18, Jansen further discloses wherein the protocol link is one of IEEE 1394, and USB (see USB interface 24, see col. 4, lines 15-19, col. 4, lines 45-58).

Regarding claim 19, Jansen further discloses wherein the physical interface is one of an IEEE 1394 and USB (see USB interface 24, see col. 4, lines 15-19, col. 4, lines 45-58).

Regarding claim 20, Jansen's teaching of the 4-wire cable such as a USB cable for connecting the outdoor unit to the computer, see col. 1, lines 5-23), permits the radio module to be flexibly positioned within a wireless network.

7. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jansen and Funk et al** as applied to claim 20 above, and further in view of **Gendel et al. (6,127,936)**.

Regarding claims 21 and 22 Jansen as modified by Funk fails to specifically teach a user interface that indicates when the radio module is optimally positioned within the wireless network wherein the user interface comprises LEDs

Gendel discloses an apparatus for providing a visual and/or audible indication of a quantity such as received signal strength to user (see col. 1, lines 38-63 and col. 4, lines 8-29), wherein the visual indicator may comprise a single LED (see col. 2, lines 15-17, lines 53-56 and col. 5, lines 12-45). According to Gendel, the system is very useful during installation to check the integrity of the system as well as finding the optimal location or point for best signal quality reception in a desired area (see col. 1, lines 28-35, col. 5, lines 46-54).

It would therefore have been obvious to one of ordinary skill in the art to incorporate the quality determination and indication feature of Gendel into the system of

Jansen and Funk in order to provide signal quality indication for desired optimal location determination as taught by Gendel.

Allowable Subject Matter

8. Claims 1-9 are allowed.

Response to Arguments

9. Applicant's arguments with respect to claims 10-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Khalifa et al. (6,526,288) discloses a system for connecting a data communication device over wireless terminals to a communication network. Thompson et al. 96,529,743) discloses a universal wireless telephone to modem adapter for transceiving information over a wireless communication system.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles N. Appiah whose telephone number is 571 272-7904. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2686

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CA


CHARLES APPIAH
PRIMARY EXAMINER